IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants: Mark Alan Shultz   Examiner: Wendmagegn, G.

Serial No: 10/811,165   Group Art Unit: 2621

Filed: March 26, 2004   Docket: PU020236

For: **PAUSE TIME RECOVERY AND PLAYBACK SPEED-UP WITHOUT LOSS OF PICTURE INFORMATION**

Mail Stop Appeal Brief-Patents
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Applicant appeals the status of Claims 1 and 3-12 as presented in response to the non-final Office Action dated September 13, 2007, and rejected in the final Office Action dated February 22, 2008, pursuant to the Notice of Appeal filed concurrently herewith and submits this appeal brief.

TABLE OF CONTENTS:

1.   **Real Party in Interest**

The real party in interest is THOMSON LICENSING S.A., the assignee of the entire right

title and interest in and to the subject application by virtue of an assignment recorded with the

Patent Office.

2.   **Related Appeals and Interferences**

Appellant asserts that no other appeals or interferences are known to the Appellant, the

Appellant's legal representative, or assignee which will directly affect or be directly affected by

or have a bearing on the Board's decision in the pending appeal.

3.   **Status of Claims**

Claims 1 and 3-12 are pending. Claims 1 and 3-12 stand rejected and are under appeal.

A copy of the Claims 1 and 3-12 is presented in Section 8 below.

4.   **Status of Amendments**

An Amendment under 37 CFR §1.111, mailed to the PTO on November 21, 2007 in

response to a non-final Office Action dated September 13, 2007, was entered. No

Responses/Amendments were filed subsequent to the above Amendment mailed on November

21, 2007. A final Office Action dated February 22, 2008, to which this Appeal Brief is directed,

is currently pending.

5.   <u>Summary of Claimed Subject Matter</u>

Independent Claim 1 is directed to "[i]n a video recording device, a method for playback at a speed faster than normal playback speed for programming originating from film without loss of program information" (Claim 1, preamble).

The subject matter of the first element (beginning with "identifying during playback") recited in Claim 1 is described, e.g., at: page 8, line 33 to page 9, line 3. Moreover, the subject matter of the first element of Claim 1 involves, e.g.: element 100 of FIG. 1.

The subject matter of the second element (beginning with "selectively dropping ones") recited in Claim 1 is described, e.g., at: page 9, lines 17-28. Moreover, the subject matter of the second element of Claim 1 involves, e.g.: element 100 of FIG. 1.

The subject matter of the third element (beginning with "wherein a number") recited in Claim 1 is described, e.g., at: page 9, line 29 to page 10, line 5; and page 11, lines 6-11. Moreover, the subject matter of the third element of Claim 1 includes element 100 of FIG. 1.

Independent Claim 7 is directed to a "digital video recorder facilitating playback of programming originating from film at a speed greater than normal playback speed" (Claim 7, preamble).

The subject matter of the first element (beginning with "a digital video storage medium") recited in Claim 7 is described, e.g., at: page 3, lines 26-29; and page 6, lines 9-13. Moreover, the subject matter of the first element of Claim 7 involves, e.g.: element 148 of FIG. 1.

The subject matter of the second element (beginning with "a decoder") recited in Claim 7 is described, e.g., at: page 5, lines 3-7; and page 5, line 32 to page 6, line 8. Moreover, the subject matter of the second element of Claim 7 involves, e.g.: element 106 of FIG. 1.

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The subject matter of the third element (beginning with "a display processor") recited in

Claim 7 is described, e.g., at: page 3, lines 26-29; and page 5, lines 3-10. Moreover, the subject

matter of the third element of Claim 7 involves, e.g.: element 102 of FIG. 1.

The subject matter of the fourth element (beginning with "wherein a number") recited in

Claim 7 is described, e.g., at: page 9, line 29 to page 10, line 5; and page 11, lines 6-11.

Moreover, the subject matter of the fourth element of Claim 7 includes element 100 of FIG. 1.

6. Grounds of Rejection to be Reviewed on Appeal

Claims 1 and 3-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S.

Patent Publication No. 2003/0081940 to Lin et al. (hereinafter "Lin") in view of U.S. Patent No.

6,553,177 to Shimizu et al. (hereinafter "Shimizu").

The preceding rejection under 35 U.S.C. §103(a) is presented for review in this Appeal

with respect to Claims 1 and 3-12, as argued with respect to independent Claims 1 and 7.

Regarding the grouping of the claims, Claims 3-6 stand or fall with Claim 1, and Claims

8-12 stand or fall with Claim 7, due to their respective dependencies.

7. Argument

A. Introduction

In general, the present invention is directed to pause time recovery and playback speed-up

without loss of picture information (Applicant's Specification, Title). As disclosed in the

Applicant's specification at page 2, lines 7-15:

[T]here are many other reasons why a viewer may wish to view a presentation at a slightly faster than normal rate. While video recording devices have the capability to perform higher than normal speed playback, these systems generally suffer from several deficiencies. For example, the audio may be distorted or there may be visible loss of program content resulting from the speed-up process. These are undesirable side-effects for viewers who simply want view the video program at a slightly accelerated play speed, but without any significant or perceptible loss of original presentation material.

Advantageously, the present principles provide "[i]n a video recording device, a method for playback at a speed faster than normal playback speed for programming originating from film without loss of program information" (Claim 1), and "[a] digital video recorder facilitating playback of programming originating from film at a speed greater than normal playback speed" (Claim 7).

The claims of the pending invention include novel features not shown in the cited references and that have already been pointed out to the Examiner. These features provide advantages over the prior art and dispense with prior art problems such as those described above with reference to the Applicant's specification.

It is respectfully asserted that independent Claims 1 and 7 are each patentably distinct and non-obvious over the cited references in their own right. For example, the below-identified limitations of independent Claims 1 and 7 are not shown in any of the cited references, either taken singly or in any combination. Moreover, these Claims are distinct from each other in that

they are directed to different implementations and/or include different limitations. For example,

Claim 1 is directed to a method, while Claim 7 is directed to a digital video recorder.

Accordingly, each of independent Claims 1 and 7 represent separate features/implementations of

the invention that are separately novel and non-obvious with respect to the prior art and to the

other claims. As such, independent Claims 1 and 7 are separately patentable and are each

presented for review in this appeal.

B.   Whether Claims 1 and 3-12 are Unpatentable Under 35 U.S.C. §103(a) With Respect

To U.S. Patent Publication No. 2003/0081940 to Lin et al. in View of U.S. Patent No.

6,553,177 to Shimizu et al.

"To establish prima facie obviousness of a claimed invention, all the claim limitations

must be taught or suggested by the prior art" (MPEP §2143.03, citing *In re Royka*, 490 F.2d 981,

180 USPQ 580 (CCPA 1974)). "If an independent claim is nonobvious under 35 U.S.C. 103,

then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing *In re Fine*, 837 F.2d

1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

The Examiner rejected Claims 1 and 3-12 as being anticipated by U.S. Patent No. 6,553,177

to Lin et al. (hereinafter "Lin") in view of U.S. Patent Publication No. 2003/0081940 to Shimizu et

al. (hereinafter "Shimizu"). The Examiner contends that the cited combination shows all the

limitations recited in these claims.

With respect to Claims 1 and 3-12, Claims 1 and 7 are the independent claims.

Lin is directed to "changing a playback speed for video presentation recorded in a modified

film format" (Lin, Title). In further detail, Lin discloses the following in his Abstract:

The invention includes a system and method 300 for changing a playback speed of a selected video segment having repeat fields. To achieve fast motion play a selected video segment can be modified to delete repeat fields 340. Further pictures can be deleted as required 360 to achieve a desired playback speed. To achieve slow motion play, a selected video segment can be modified by encoding repeat fields into conventional field pictures. Further pictures can be added as required to achieve a desired playback speed 330. Further, a repeat first field flag in the picture header of the picture containing the repeat field can be set to zero 325. Furthermore, a GOP structure of the modified video segment can be reencoded into a conventional 365 or a desired 367 GOP structure. Additionally, the modified video segment can be recorded exclusively on a desired portion of a storage medium 370.

Shimizu is directed to "information recording and reproducing system" (Shimizu, Title). In further detail, Shimizu discloses the following in his Abstract:

A desired catch-up time at which reproduction started after a start of recording of input information catches up the recording is set. Recording start time, present time and recording end time are detected. A rate of the reproduction necessary to catch up the recording at the set catch-up time is determined recording start time, present time, and recording end time. The recorded information is reproduced at a determined rate until the set catch-up time.

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It will be shown herein below that the limitations of Claims 1 and 7 reproduced

herein are not shown in the cited combination, and that Claims 1 and 7 should be allowed

including the claims dependent there from as identified in Section 6 herein.

B1.   Claims 1 and 3-12

Initially, it is respectfully pointed out to the Examiner that Claims 3-6 and 8-12

respectively depend from Claims 1 and 7 and, thus, include all the limitations of Claims 1 and 7

respectively.

It is respectfully asserted that neither Lin or Shimizu, either taken singly or in

combination, teach or suggest "wherein a number of the selectively dropped ones of said

identified repeated image information is determined directly responsive to a user input specifying

non-speed time information or an integer representing which occurrence of a same repeated

image information is to be dropped", as recited in each of Claims 1 and 7 (and hence also Claims

3-6 and 8-12 by virtue of their respective dependencies from Claims 1 and 7).

For example, as explicitly admitted by the Examiner, "Line [sic - Lin] et al ... does not

teach a number of the selectively dropped ones of the said identified repeated image information

is determined directly responsive to a user input specifying non-speed time information or an

integer representing which occurrence of a same repeated image information is to be dropped"

(Office Action, pp. 2-3).

However, the Examiner erroneously relied upon Shimizu for teaching the same. In particular, the Examiner cited column 4, lines 43-52 and figures 2-3 of Shimizu as disclosing the same. The Applicants respectfully disagree.

It is to be noted that Shimizu is directed to a system for controlling information reproduction and recording such that the both are simultaneously performed (Shimizu, col. 1, lines 8-11).

The above cited textual portion of Shimizu, namely column 4, lines 43-52, will now be reproduced as follows:

In the information recording and reproducing system S, the user manipulates the manipulation unit to set desired catch-up time T_{reach} at which the reproduction will catch up the recording at the set catch-up time T_{reach}. The CPU 14 detects recording start time T_{in} at which information recording starts and checks the present time T_{now} and information recording end time T_{out} (step S2). Based on those conditions, the CPU calculates an M-fold reproducing rate necessary to catch up the recording with the designated time T_{reach} using the following formula (step S3):

$$M = (T_{reach} - T_{in})/(T_{reach} - T_{now})$$

Figures 2 and 3 of Shimizu similarly relate to catch-up time T_{reach} and its use to calculate the M-fold reproducing rate.

Thus, the desired catch-up time *Treach* is the time at which the reproduction will catch up

to the recording. The desired catch-up time *Treach* is used to calculate an M-fold reproducing rate

necessary to catch up the recording with the designated time. However, according to the teachings

of Shimizu, catching up using the M-fold reproduction rate could involve "greatly skipping the

content of the program" (Shimizu, col. 8, line 63 to col. 9, line 3). In contrast, Claims 1 and 3-12

recite, *inter alia*, "wherein a number of the selectively dropped ones of said identified ***repeated***

image information is determined directly responsive ...."

Hence, based on the preceding teachings of Shimizu, three arguments will now be made.

The first argument is that the desired catch-up time *Treach* does not correspond to the non-speed

time information recited in Claims 1 and 3-12 and, thus, Shimizu (taken together with Lin) does not

teach or suggest all the limitations recited in Claims 1 and 3-12. The second argument is that

Shimizu teaches away from the limitations recited in Claims 1 and 3-12, as prohibited under MPEP

§2145, and, thus, renders the combination deficient and inapplicable to Claims 1 and 3-12. The

third argument is that the proposed modification renders the prior art unsatisfactory for its intended

purpose or changes the principle of operation of a reference, as prohibited under MPEP §2143.01,

thus rendering the combination deficient and inapplicable to Claims 1 and 3-12.

With respect to the first argument (that the cited combination fails to disclose all the

limitations recited in Claims 1 and 3-12), in Claims 1 and 3-12 a number of the selectively dropped

ones of said identified repeated image information is determined **DIRECTLY RESPONSIVE** to a

user input specifying the non-speed time information or an integer representing which occurrence of

a same repeated image information is to be dropped. In contrast, the M-fold reproduction rate is

directly determined from the catch-up time *Treach* , but any content that is skipped is

INDIRECTLY determined from the catch-up time *Treach* (since the primary purpose of the catch-up time *Treach* is to enable the reproduction time to catch up to the recording time, and is not to determine which content is skipped. First, the M-fold reproduction rate (at the least) must be calculated, thus rendering any association between the catch-up time *Treach* and any skipped content as INDIRECT).

Accordingly, Shimizu does not teach or suggest all the above recited limitations of Claims 1 and 3-12. Moreover, Lin does not cure the deficiencies of Shimizu, and is silent with respect to the above limitations (as admitted by the Examiner on pages 2-3 of the Office Action).

With respect to the second argument, it is respectfully asserted that Shimizu teaches away from the limitations of Claims 1 and 3-12 and teaches away from the teachings of Lin (which discloses deleting "repeat fields", see, e.g., Lin, Abstract). That is, while Claims 1 and 3-12 each recite, *inter alia*, "wherein a number of the selectively dropped ones of said identified ***repeated image information*** is determined directly responsive ..." and Lin discloses deleting "repeat fields" (see, e.g., Lin, Abstract), Shimizu discloses that catching up using the M-fold reproduction rate could involve "**greatly skipping the content of the program**" (Shimizu, col. 8, line 63 to col. 9, line 3). No consideration is given in Shimizu to repeat information and, thus, any information, including non-repeat information, is deleted according to the approach of Shimizu.

As is known, a prior art reference must be considered in its entirety, i.e., as a whole, INCLUDING PORTIONS THAT WOULD LEAD AWAY FROM THE CLAIMED INVENTION. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (emphasis added) (*see also*, MPEP §2141.02)).

According to MPEP 2145, it is improper to combine references where the references

teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed.

Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested

by the combination of a reference which taught the interchangeability of antimony and alkali

metal with the same beneficial result, combined with a reference expressly excluding antimony

from, and adding iron to, a catalyst.).

Hence, it is respectfully asserted that the combination of Lin and Shimizu is improper

since Shimizu teaches away from Lin (and the limitations of Claims 1 and 3-12), and any

rejection based on the same should be withdrawn.

With respect to the third argument (proposed modification renders the prior art

unsatisfactory for its intended purpose or changes the principle of operation of a reference), the

following text of MPEP §2143.01 is provided:

> If the proposed modification or combination of the prior art would change
>
> the principle of operation of the prior art invention being modified, then the
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> teachings of the references are not sufficient to render the claims *prima facie*
>
> obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were
>
> directed to an oil seal comprising a bore engaging portion with outwardly biased
>
> resilient spring fingers inserted in a resilient sealing member. The primary
>
> reference relied upon in a rejection based on a combination of references
>
> disclosed an oil seal wherein the bore engaging portion was reinforced by a
>
> cylindrical sheet metal casing. Patentee taught the device required rigidity for

operation, whereas the claimed invention required resiliency. The court reversed

the rejection holding the "suggested combination of references would require a

substantial reconstruction and redesign of the elements shown in [the primary

reference] as well as a change in the basic principle under which the [primary

reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at

352.).

Here, Lin discloses the deletion of **repeat fields** (see, e.g., Lin, Abstract), and Claims 1

and 3-12 each recite, *inter alia*, "wherein a number of the selectively dropped ones of said

identified ***repeated* image information** is determined directly responsive ...." However, in

contrast to the preceding, Shimizu discloses the "**greatly skipping the content of the program**"

(Shimizu, col. 8, line 63 to col. 9, line 3). The example provided at column line 63 to column

line 3 of Shimizu is directed to a user who returns home at p.m. 10 with the reservation of

recording a TV program set from p.m. 9 to p.m. 11, where it still takes time from p.m. 10 to p.m.

12 for time-shift reproduction. If the user wants to finish watching the recorded program by p.m.

11, a six-fold reproduction rate "is executed while greatly skipping the content of the program.

In this case, reproduction catches up with recording in 12 minutes...." As is evident from the

preceding example from Shimizu, very significant (non-repeated) portions of the programming

are skipped, contrary to the teachings of Lin and the limitations recited in Claims 1 and 3-12.

Such an approach, i.e., one without consideration of whether the information being deleted is

repeat information or not, must be taken by Shimizu (including in the very example provided in

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Shimizu) in order to implement his goal of enabling the reproduction to catch up to the recording.

Hence, a combination of Shimizu with Lin would change principle of operation of the prior art invention being modified (Lin), which is a prohibition against a reference (Shimizu) being used against a pending claim as provided in MPEP §2143.01

Thus, it is respectfully asserted that the combination of Lin and Shimizu is improper since Shimizu changes the principle of operation of Lin, and any rejection based on the same should be withdrawn.

Accordingly, Claims 1 and 7 (as well as 3-6 and 8-12) are patentably distinct and non-obvious over the cited references for at least the reasons set forth above. Therefore, withdrawal of the rejection and allowance of Claim 1 (and, thus, also Claims 3-6) and Claim 7 (and, thus, also Claims 8-12) is earnestly requested.

C.   Conclusion

Thus, the Appellant submits that none of the claims presently in the application, and particularly claims 1 and 3-12, are rendered obvious under the provisions of 35 U.S.C. § 103. Consequently, the Appellant believes all these claims are presently in condition for allowance.

For at least the reasons advanced above, the Appellant respectfully urges that the rejection of claims 1and 3-12 as being obvious under 35 U.S.C. §103 are improper. Reversal of the rejections in this Appeal is respectfully requested.

Respectfully submitted,

/12 May 08
Date

Jorge Tony Villabon,
Attorney for the Appellant
Registration No. 52,322
(609) 734-6445

Patent Operations
Thomson Licensing
P.O. Box 5312
Princeton, New Jersey 08543-5312

8.   CLAIMS APPENDIX

1. (previously presented) In a video recording device, a method for playback at a speed

faster than normal playback speed for programming originating from film without loss of

program information, comprising the steps of:

identifying during playback repeated image information indicative of film original

material; and,

selectively dropping ones of said identified repeated image information to increase a

playback speed of said programming originating from film,

wherein a number of the selectively dropped ones of said identified repeated image

information is determined directly responsive to a user input specifying non-speed time

information or an integer representing which occurrence of a same repeated image information is

to be dropped.

2. (cancelled)

3. (previously presented) The method according to claim 1, further comprising the step

of automatically calculating a rate at which said repeated image information must be dropped

responsive to the user input specifying the non-speed time information.

4. (previously presented) The method according to claim 1, wherein said user input

specifying the non-speed time information identifies a desired time for completion of playback of

a recorded presentation.

5. (original) The method according to claim 3, further comprising the step of selectively dropping said repeated image information at said rate that has been automatically calculated.

6. (original) The method according to claim 1, wherein said repeated image information comprises redundant field pictures.

7. (previously presented) A digital video recorder facilitating playback of programming originating from film at a speed greater than normal playback speed, comprising:

a digital video storage medium containing a record having programming originating from film;

a decoder for decoding said record to form an uncompressed picture signal; and,

a display processor receiving and formatting said uncompressed picture signal for a television display rate, controlling said formatting to selectively drop redundant field pictures and increase said playback speed of said programming originating from film,

wherein a number of said redundant field pictures that are dropped is determined directly responsive to a user input specifying non-speed time information or an integer representing which occurrence of a same redundant field is to be dropped.

8. (previously presented) The digital video recorder according to claim 7, wherein said display processor formats said uncompressed picture signal for television display by controllably

duplicating pictures within said uncompressed picture signal to produce a television picture

display rate.

9. (previously presented) The digital video recorder according to claim 7, wherein a

controller is responsive to the user input for selectively controlling the number of said redundant

field pictures that are dropped by said display processor.

10. (previously presented) The digital video recorder according to claim 7, wherein a

controller automatically calculates the rate at which said redundant field pictures must be

dropped responsive to the user input specifying the non-speed time information.

11. (previously presented) The digital video recorder according to claim 10, wherein

said user input specifying the non-speed time information identifies a desired time for completion

of said presentation.

12. (original) The digital video recorder according to claim 10, wherein said display

processor selectively drops said redundant field pictures at said rate that has been automatically

calculated.

9. RELATED EVIDENCE APPENDIX

None.

10.   **RELATED PROCEEDINGS APPENDIX**

None